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EXAMINER	
DICKEY, THOMAS L	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Advisory Action Before the Filing of an Appeal Brief	**Application No.** 08/820,374	**Applicant(s)** HWANG, CHEOL-SUNG	
	Examiner Thomas L. Dickey	**Art Unit** 2826	

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 24 April 2007 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE.

1. ☒ The reply was filed after a final rejection, but prior to or on the same day as filing a Notice of Appeal. To avoid abandonment of this application, applicant must timely file one of the following replies: (1) an amendment, affidavit, or other evidence, which places the application in condition for allowance; (2) a Notice of Appeal (with appeal fee) in compliance with 37 CFR 41.31; or (3) a Request for Continued Examination (RCE) in compliance with 37 CFR 1.114. The reply must be filed within one of the following time periods:
   a) ☐ The period for reply expires _____months from the mailing date of the final rejection.
   b) ☒ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection.

   Examiner Note: If box 1 is checked, check either box (a) or (b). ONLY CHECK BOX (b) WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

NOTICE OF APPEAL

2. ☐ The Notice of Appeal was filed on _____. A brief in compliance with 37 CFR 41.37 must be filed within two months of the date of filing the Notice of Appeal (37 CFR 41.37(a)), or any extension thereof (37 CFR 41.37(e)), to avoid dismissal of the appeal. Since a Notice of Appeal has been filed, any reply must be filed within the time period set forth in 37 CFR 41.37(a).

AMENDMENTS

3. ☐ The proposed amendment(s) filed after a final rejection, but prior to the date of filing a brief, will not be entered because
   (a) ☐ They raise new issues that would require further consideration and/or search (see NOTE below);
   (b) ☐ They raise the issue of new matter (see NOTE below);
   (c) ☐ They are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
   (d) ☐ They present additional claims without canceling a corresponding number of finally rejected claims.

   NOTE: _____. (See 37 CFR 1.116 and 41.33(a)).
4. ☐ The amendments are not in compliance with 37 CFR 1.121. See attached Notice of Non-Compliant Amendment (PTOL-324).
5. ☐ Applicant's reply has overcome the following rejection(s): _____.
6. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
7. ☐ For purposes of appeal, the proposed amendment(s): a) ☐ will not be entered, or b) ☐ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.
   The status of the claim(s) is (or will be) as follows:
   Claim(s) allowed: _____.
   Claim(s) objected to: _____.
   Claim(s) rejected: _____.
   Claim(s) withdrawn from consideration: _____.

AFFIDAVIT OR OTHER EVIDENCE

8. ☐ The affidavit or other evidence filed after a final action, but before or on the date of filing a Notice of Appeal will not be entered because applicant failed to provide a showing of good and sufficient reasons why the affidavit or other evidence is necessary and was not earlier presented. See 37 CFR 1.116(e).
9. ☐ The affidavit or other evidence filed after the date of filing a Notice of Appeal, but prior to the date of filing a brief, will not be entered because the affidavit or other evidence failed to overcome all rejections under appeal and/or appellant fails to provide a showing a good and sufficient reasons why it is necessary and was not earlier presented. See 37 CFR 41.33(d)(1).
10. ☐ The affidavit or other evidence is entered. An explanation of the status of the claims after entry is below or attached.

REQUEST FOR RECONSIDERATION/OTHER

11. ☒ The request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached.
12. ☐ Note the attached Information Disclosure Statement(s). (PTO/SB/08) Paper No(s). _____
13. ☐ Other: _____.

Thomas L Dickey
Primary Examiner
Art Unit: 2826

It is initially argued, at page 6 of the remarks, that "In a case now pending before the Office for over ten (10) years, applicant can not help but feel misused by the process and believes that the stated final rejection in the Office Action dated February 27, 2007 crosses the boundary between persistent and cynicism." This Office misplaced Applicant's initial authorization to charge his basic filing fee. As a result, Applicant's basic filing fee was not credited until 12/27/2002. Prosecution of this application was therefor delayed five years, nine months, and fifteen days, until after the crediting of the basic filing fee. This was an unfortunate occurrence. This Office cannot, however, "make-up" the difference (in the fashion of a basketball or football referee "making up" a bad call to a team) to Applicant by making non-obviousness findings contrary to the evidence. In the first instance, such findings would be unfair to Applicant. This Office is not the final arbitrator of non-obviousness, and it would be manifestly unfair to Applicant to leave Applicant believing that the evidence dictated a result contrary to a result likely arrived at by one who did not "owe" applicant anything. In the second instance, this Office is charged with operating in the public interest. 35 U.S.C. 2. Finally, there is a comprehensive statutory scheme in place, which prescribes particularized relief to applicants treated to delays such as the one Applicant encountered in this case. See 35 U.S.C. 155(b). Since Congress has seen fit to prescribe Applicant's relief for the delays he has encountered, it would be especially inappropriate for the Examiner to attempt to supply Applicant with a remedy by unofficial means.

It should also be noted that Applicant has made his own good use of the time spent actually spent examining the claims, making narrowing amendments on 12/20/05, again on 4/10/06; and again on 11/28/06. Note in particular that the limitation that the lower substrate be overetched was added on 4/10/06; and the limitation that the overetch form a "step" was added on 11/28/06. The "step" is not disclosed *ipsissimis verbis* in the application as filed; however the Examiner has made the finding (or "taken the position," if Applicant prefers that language over the recital of a "finding") that Applicant's originally filed language:

> FIG. 7 shows an etch-back process for controlling the contact layer 19 to a uniform thickness. In the preferred embodiment, the Pt thin film contact layer 19 is sputter-deposited and electrically isolates the node patterns which are connected to one another. During the etch-back process, a mixture of Ar and Cl2 gases are preferably used as a reactive gas for etching back of the contact layer 19. The process is controlled to form a contact thin film 29, a Pt thin film in the preferred embodiment, which remains on the top and sides of the node pattern at a thickness of about 60 angstroms. In the etch-back process of the preferred embodiment, the Pt deposited between the node patterns is preferably overetched, together with a portion of the interlayer insulating film 12 below the Pt layer, so that the nodes are entirely isolated from one another.

found at page 8 line 20 through page 9 line 5, would have adequately informed one of skill in the art that the disclosed overetch forms a step, especially in light of the fact that (as Applicant points out on page 7 of his current remarks) Matsumoto et al. discloses that the "conventional manufacturing method" typically substantially (meaning thereby that a substantial part of the insulating film is removed by the etch, note figure 8(c) of Matsumoto et al.) etches an insulating film such as Applicant's film 12.

Matsumoto et al. also discloses that conventional methods uses Ar or Cl_2 gases, and that Cl_2 gases etch silicon oxide (such as forms, for example, Applicant's dielectric 12), 2.5 times faster than it does platinum (such as forms, for example, Applicant's third layer 19). This means (according to Matsumoto et al.) that those of skill in the art had often had the experience of observing silicon oxide dielectric layers (such as Applicant's dielectric layer 12) being "significantly etched," by etching practices prevalent before the invention of Matsumoto et al. Note column 2 lines 41-67 of Matsumoto et al.

In light of the fact (supplied by Matsumoto et al.) that one of skill in the art would have been thoroughly familiar with the Ar/Cl_2 etch disclosed in Applicant's initial disclosure, as well as the likely results of employing such an etch, the Examiner has found ("posited," in Applicant's language) that Applicant's 11/28/06 amended language claiming a "step" meets the requirements of 35 USC § 112. This is because, for purposes of meeting the written description requirement, Applicant's original disclosure must be interpreted as it would have been understood by one of ordinary skill in the art as of the filing date (which is also initially presumed to be the date of invention).

However, evidence of the understanding of one of ordinary skill in the art, at the time of the invention, also informs the obviousness analysis. See 35 USC § 103 and *Graham v. John Deere*, 383 US 1 (1967). For this reason the understanding of one of ordinary skill in the art is a decidedly two-edged sword, particularly when a claim (such as Applicant's claim 25, as amended) relies for patentability on modifying the invention (such as the $TiN/RuO_2/Pt$ triple layer lower ferroelectric capacitor electrode of Summerfelt et al.'s figure 23 embodiment) of another in a manner that is well-understood in a general sense by those of skill in the art, and only briefly (such as the one paragraph devoted to this topic in Applicant's specification) mentioned (but nonetheless fully described, in light of the familiarity of those of skill in the art) in the application as filed.

Applicant next argues, "To maintain a position that pending claims 25-28 and 30-34 are unpatentable under 35 U.S.C. § 103 over U.S. Patent No. 5,566,045 to Summerfelt et al. in view of U.S. Patent No.

5,254,217 to Maniar et al. is simply not credible." The "position" to which Applicant refers is the Examiner's *prima facie* finding of obviousness, under 35 USC § 103.

The legal concept of *prima facie* obviousness is a procedural tool of examination that applies broadly to all arts. It allocates who has the burden of going forward with production of evidence in each step of the examination process. See *In re Rinehart*, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976); *In re Linter*, 458 F.2d 1013, 173 USPQ 560 (CCPA 1972); *In re Saunders*, 444 F.2d 599, 170 USPQ 213 (CCPA 1971); *In re Tiffin*, 443 F.2d 394, 170 USPQ 88 (CCPA 1971), *amended*, 448 F.2d 791, 171 USPQ 294 (CCPA 1971); *In re Warner*, 379 F.2d 1011, 154 USPQ 173 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968). The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness. If, however, the examiner does produce a *prima facie* case, the burden of coming forward with evidence or arguments shifts to the applicant who may submit additional evidence of nonobviousness, such as comparative test data showing that the claimed invention possesses improved properties not expected by the prior art. The initial evaluation of *prima facie* obviousness thus relieves both the examiner and applicant from evaluating evidence beyond the prior art and the evidence in the specification as filed until the art has been shown to suggest the claimed invention. See MPEP § 2142.

The *prima facie* case must be supported by some factual evidence in each of its required elements. To support, *prima facie,* a finding of obviousness, this evidence must cover: 1) the scope and content of the prior art; 2) differences between the prior art and the claims at issue; and 3) the level of ordinary skill in the pertinent art resolved. *Graham*, 383 US at 17. Applicant implies that this evidence must also meet some sort of "credibility" test. The Examiner has, frankly, never heard of a requirement subjecting the evidence behind a *prima facie* case to credibility testing. Where does Applicant find such a requirement? How does one subject the evidence supplied by Summerfelt et al., Maniar et al., and Matsumoto et al. to the credibility test Applicant proposes?[1]

Obviousness

The stage for the current non-obviousness discussion is set by noting that the Examiner has found that the Figure 23 embodiment of Summerfelt et al. discloses a lower electrode of a capacitor in a semiconductor device, comprising a first layer 34 comprising TiN (note Table, column 12), a material that serves as a barrier against the diffusion of impurities from a lower substrate 32; a second layer 66 formed over the first layer 34, the second layer 66 may comprise RuO_2 (note the table entry for layer 66), a material that is, by applicants' admission, easy to pattern; and a third layer 68 formed over top and side surfaces of the second layer 66 and side surfaces of the first layer 34, the third layer 68 may comprise Pt (note the table entry for layer 68), a material having, by applicants' admission, low leakage current properties. Applicant does not appear to dispute these findings. There is only one claimed limitation that Summerfelt et al. does not disclose. In the words of Applicant's claims 25 and 30, it is the limitation that:

> the lower substrate [claim 30 recites "insulating film," such as the insulating film 32 that forms a portion of Summerfelt et al.'s lower substrate] exposed by the third layer[2] is overetched to form a step in an upper surface of the lower substrate ("insulating film").

Emphasis added. The overetch, and the resulting step, in the Examiner's opinion, cannot be considered inherent, as these limitations reflect a conscious decision on the part of the maker of an embodiment of the claimed invention to thoroughly etch the surface of the lower substrate during manufacture in order (for example) to clean up stray metal on the surface of the substrate and assure that the only available conductive path to an individual lower ferroelectric capacitor electrode in through the conductive plug (see claim 30) that connects the lower electrode to read/write circuitry (not claimed) in the semiconductor substrate (again, see claim 30). However, in the Examiner's opinion, such a conscious substrate-cleaning decision (and a willingness to live with a resulting overetch causing, in its turn, a resulting step) would have been obvious to one of skill in the art, at the time of the invention.

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1 The Examiner is pulling Applicant's leg a little, here; hopefully very gently. The Examiner's point is that all cases include two dramatically different sorts of conclusions: Conclusions of fact and conclusions of law. The former (or at least the evidence behind them) can be tested for "credibility" (some forums vigorously test evidence for credibility); the latter cannot. It is clear, moreover, that almost anybody can occasionally confuse the two sorts of conclusions. See *Dennison Mfg. Co. v. Panduit Corp.*, 475 U.S. 809 (1986). As to the legal standard for finding obviousness, while a legal standard cannot, in the Examiner's view, be tested for "credibility," there seems to be endless debate, of late, as to the exact standard that is proper. See, e.g., *In re Kahn*, 441 F.3d 977, 987-988, 78 USPQ2d 1329, 1340 (Fed. Cir. 2006); *Alza Corp. v. Mylan Laboratories Inc.*, 80 USPQ2d 1001, 1006 (Fed. Cir. 2006); *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 80 USPQ2d 1641 (Fed. Cir. 2006); *Old Town Canoe Co. v. Confluence Holdings Corp.*, 78 USPQ2d 1705 (Fed. Cir. 2006); and, of course, *KSR v. Teleflex*, 500 U.S. ___, (4/30/2007). The Examiner does not intend, however, to add his voice to this debate. The Examiner's conclusions of law resulted from a search made using the same techniques (in a different database) as the search that yielded the evidence behind his conclusions of fact.

2 Note that the words "exposed by the third layer" identify a portion of the lower substrate. It is the portion not overlain by the first, second, and third layers, as they project from the lower substrate. The Examiner has found, and Applicant does not dispute, that Summerfelt et al.'s third layer 68 exposes such a portion of the insulating film 32 of Summerfelt et al.'s lower substrate.

It is argued, at page 6 of the remarks, that "[considering] Maniar [sic], the examiner (perhaps taking official but un-noted notice?) concludes that Maniar [sic] can not possibly come to 'a sudden screeching stop,' but must somehow materially etch some portion of the substrate." The Examiner's conclusion of a lack of "a sudden screeching stop," is based, not on "official notice," but on the evidence supplied by Maniar et al.

The Examiner reads Maniar et al. as disclosing etching bottom plate (lower electrode) 50 (column 6 line 27) by the use of a "substantial overetch" (column 6 line 33) to "remove all [excess] portions" (column 6 line 34) of the first layer, using an etch having a "high [but not infinite] degree of selectivity" (column 6 lines 36-37) "without unduly etching[3] away the surface of substrate 54" (column 5 line 31). Applicant appears to have skipped straight to column 5 line 31, and not read column 6.

Note that if (as is required by Applicant's claims, and disclosed by Summerfelt et al.) the substrate is exposed, the only way to completely avoid etching the substrate would be to use an etch having an infinite (not simply "high" as disclosed by the reference) degree of selectivity. The "degree of selectivity," although not defined in the reference, is a term of art for the ratio of the rates of etching speed in the different materials the etch is designed to be selective for (since the Examiner has limited time he is going to take "official notice" of the definition of "degree of selectivity"). It is the Examiner's conclusion, based on the evidence in the reference, that Maniar et al., recognizing that their etch had merely "high" (not infinite) selectivity, were willing to settle for merely "not unduly" etching away the surface of substrate 54."

It is argued, at page 7 of the remarks, that "Applicant has not claimed the 'etching' (inadvertent or otherwise) of 'some portion' of the lower substrate. Applicant does not present method claims here!" However, read *verbatim*, claims 25 and 30 claim that "the lower substrate exposed by third layer is over etched," and that "the insulating film exposed by the third layer is over etched." The extent to which this recital does not (as Applicant insists) present a process limitation (included in "product-by-process" form) might depend, as a famous lawyer once put it, on what "is" is. But in the Examiner's view, in its broadest reasonable interpretation[4], the phrase, "is over etched" (read consistently with Applicant's specification, specifically the language, "In the etch-back process of the preferred embodiment, the Pt deposited between the node patterns is preferably overetched, together with a portion of the interlayer," on page 8 line 24) means, "made by over etching."

It is further argued at page 7 that "This 'language translation for ease of rejection approach' is particularly obnoxious since Maniar [sic] and Matsumoto [sic] expressly teach away for the process results hypothesized by the examiner." However, disclosed examples and preferred embodiments do not constitute a teaching away from a broader disclosure or nonpreferred embodiments. *In re Susi,* 440 F.2d 442, 169 USPQ 423 (CCPA 1971). See also MPEP § 2123. Maniar et al. teaches the value of a thorough etching (over etching) to clean out stray metal from the surface of the substrate. As Applicant himself points out, Maniar's "nonpreferred" embodiment is one in which the substrate is etched but not "unduly" so. Note column 5 line 30 of Maniar et al. According to *In re Susi,* the "preference" Applicant detects in Maniar et al. for a completely un-etched substrate does not constitute a "teaching away," because Maniar et al. also teach a nonpreferred embodiment that is consistent with the claimed invention.

Regarding Matsumoto et al., as has been explained to Applicant, in columns 1, 2, and a portion of column 3, and figures 8(a)-8(c), Matsumoto et al. describe in detail the "conventional" method of patterning a platinum layer 5 into a ferroelectric capacitor lower electrode 5a, on a silicon oxide substrate, using Cl_2 or Ar etching. This (which Matsumoto et al. refer to as the "prior art," i.e., prior to Matsumoto et al.'s invention) is the "broader disclosure" of Matsumoto et al. The portion of Matsumoto et al.'s disclosure that Applicant asserts "teaches away" from the modification required to make the claimed invention is Matsumoto et al.'s invention. Matsumoto et al.'s own invention, which they clearly (and, human nature being what it is, quite understandably) show a preference for, is a "narrow disclosure," relative to the broader "prior art" disclosure. But under the directive of *In re Susi,* this narrow disclosure cannot be considered to be "teaching away" from the broader "prior art" disclosure.

It is further argued at page 7 that "Matsumoto [sic] alleges some reduction in the amount of lower substrate etching inadvertently done by an unspecified 'conventional manufacturing method.'" Matsumoto et al.'s "unspecified" conventional etching method uses RIE with Cl_2 as a reactive gas, at a gas flow of 20 sccm, gas pressure of 1 Pa. Matsumoto et al., column 2 lines 16-19. When the RF power supplied to Matsumoto et al.'s "unspecified" conventional etching method is varied over a range between 200 W and 600 W, the etching speed of platinum (the sort of platinum that "is over etched" in Applicant's own preferred embodiment, note Application, page 9, lines 1-3) in Matsumoto et al.'s "unspecified" conventional etching method varies from 30

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3 The generic version of "Without unduly etching," is "Without unduly ___ing," with "___" standing for any English verb from which a gerund can be made. The Examiner's personal experience with the English language has led him to the belief that the phrase, "Without unduly ___ing," is understood, colloquially, to mean " ___ing, but not excessively ___ing." Does the Applicant have a generally applicable alternate colloquial definition of the phrase, "Without unduly ___ing?"

4 Patent claims construed during reexamination should be given their broadest reasonable interpretation consistent with specification, and should be read in light of specification as it would be interpreted by person of skill in art, since this policy serves public interest by reducing possibility that claims, finally allowed, will be given broader scope than is justified. See *In re American Academy of Science Tech Center*, 70 USPQ2d 1827, (Fed. Cir. 2004)

to 100 nanometers per minute. Matsumoto et al., column 2 lines 21-22. The Examiner notes that Applicant's invention is made, according to Applicant, in an "etch-back" process using Cl_2 as a reactive gas. Application, page 8 lines 20-25. What gas flow does Applicant use? What pressure? Does Applicant employ RIE? How much RF power? How fast does Applicant etch his platinum? Do any of these questions matter, given that, according to Matsumoto et al., there was a perfectly good "unspecified" ("unspecified," that is, except for the etching gas flow rate, the pressure, the RF power, and the etch rates) conventional manufacturing method capable of performing the etch-back process Applicant alludes to in his specification? Thus enabling (as far as the "make" requirement in the "make and use" phrase found in 35 USC § 112) Applicant's invention no matter how vaguely Applicant himself disclosed the making of it? The evidence suggests that, far from being "unspecified," Matsumoto et al.'s "conventional etching method" is specified with a degree of detail Applicant did not (and need not have, given the availability of the "conventional etching method") specify for his own etching method.

It is further argued at page 7 that "It is apparently no longer necessary to consider the express teachings and clearly stated purposes of prior art references." In fact, a suggestion, teaching, or motivation to combine the relevant prior art teachings does not have to be found in the express teachings of the prior art. Applicant is asked, however, to please not blame the Examiner for this state of affairs.

"The teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated in the references.... The test for an implicit showing is what the combined teachings, knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art." *Alza Corp. v. Mylan Laboratories Inc.*, 80 USPQ2d 1001, 1006 (Fed. Cir. 2006), citing *In re Kahn*, 441 F.3d 977, 987-988, 78 USPQ2d 1329, 1340 (Fed. Cir. 2006) (which, in its turn, quotes *In re Kotzab*, 217 F.3d 1365, 1370, 55 USPQ2d 1313,1318 (Fed. Cir. 2000)). See also *DyStar Textilfarben GmbH & Co. Deutschland KG v. C.H. Patrick Co.*, 80 USPQ2d 1641 (Fed. Cir. 2006) and *Old Town Canoe Co. v. Confluence Holdings Corp.*, 78 USPQ2d 1705 (Fed. Cir. 2006). It would therefore be improper for the Examiner to ignore evidence of what "the knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole would have suggested to those of ordinary skill in the art," and concentrate solely, as applicant suggests, on "the express teachings and clearly stated purposes of prior art references." Also instructive on this point, although the Examiner has not yet been completely instructed on how to interpret it, is *KSR v. Teleflex*, 500 U.S. ___, (2007): "As our precedents make clear, however, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ." (Slip op. at 14).

The Examiner does have a particular bone to pick with the *Alza, Kahn, Kotzab, DyStar,* and *Old Town Canoe Co.* courts, as well as the *KSR* Court. The law requires the Examiner to find obviousness, when it is present, in what "the knowledge of one of ordinary skill in the art, and the nature of the problem to be solved as a whole" would have "suggested to those of ordinary skill in the art," and in "the inferences and creative steps that a person of ordinary skill in the art would employ." But how is the Examiner to know, as a matter of fact, exactly what "the knowledge of one of ordinary skill in the art," the general understanding of "the nature of the problem to be solved," and "the inferences and creative steps that a person of ordinary skill in the art would employ," *were*, at the time (presumptively November 17, 1995; with perfection of foreign priority, May 29, 1995) of Applicant's invention? *KSR* requires "an explicit finding of an apparent reason to combine the known elements in the fashion claimed," *KSR*, slip op. at 14. This requirement, in the Examiner's opinion, requires timely and documented evidence. "Apparent reason to combine," does not (at least in this Examiner's opinion) mean "apparent, today, to the Examiner." To be in keeping with the plain language of § 103, it can only mean "apparent as of the time of the invention, to one of skill in the art."

In this case we are fortunate. Matsumoto et al. tell us, with specificity, what kind of "conventional" etching processes would have been within the "knowledge of one of ordinary skill in the art" at the time of the invention. Maniar et al. teach us that one of skill in the art would have understood "the nature of the problem to be solved" to include the problem (solvable by overetching) of stray metal laid down on the substrate during a sputtering process that would have created a platinum lower ferroelectric capacitor electrode.

Applicant has the option of introducing evidence of his own[5] that might refute the existing evidence supporting the *prima facie* case of obviousness. Applicant also has the option of amending his claims to further define his invention. Or Applicant may appeal on the record as it stands. Those are the options, as the Examiner sees them.

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5 During 1/8/07 oral arguments in *In re Wheatley*, No. 06-1400 (affirmed per curiam under Rule 56) the court asked Appellant's counsel why Appellant, as applicant, had not supplied his own evidence to refute the Office's prima facie case. Counsel replied, "Well, your Honor, hindsight is always 20-20 in these obviousness cases."